TABLE 4.—*Mean altitudes and temperatures of significant points identifiable as tropopauses during August 1940, classified according to the potential temperatures (10° intervals between 290° and 409° A) with which they are identified (based on radiosonde observations)*—Continued

Potential temperatures °A.	Phoenix, Ariz.			Sault Ste. Marie, Mich.			Atlantic Sta. No. 2 [2]		
	Number of cases	Mean altitude (km.) m.s.l.	Mean temperature °C.	Number of cases	Mean altitude (km.) m.s.l.	Mean temperature °C.	Number of cases	Mean altitude (km.) m.s.l.	Mean temperature °C.
290–299									
300–309				1	7.3	−37.0			
310–319				3	8.7	−44.0	1	8.7	−45.0
320–329				10	10.0	−49.5	1	9.7	−49.0
330–339	5	11.6	−56.0	13	10.9	−51.0	7	11.5	−53.7
340–349	14	12.1	−51.4	10	12.1	−54.8	26	12.5	−57.5
350–359	15	13.7	−61.6	12	13.0	−57.2	11	13.5	−61.6
360–369	20	14.8	−67.6	5	14.1	−62.6	7	14.5	−65.4
370–379	9	15.4	−68.2	6	14.0	−57.7	5	15.0	−64.8
380–389	6	16.4	−72.2	9	15.0	−60.3	1	15.6	−61.0
390–399	9	16.7	−69.9	3	16.2	−63.0	3	15.9	−66.3
400–409									
Weighted means		14.3	−63.5		12.4	−54.9		13.1	−59.4
Mean potential temperature °A. (weighted)		362.9			350.5			351.4	
No. days with observations		28			26			25	

[2] In or near the 5° square, lat. 40°00′N. to 45°00′N., long. 40°00′W. to 45°00′W.

WEATHER ON THE NORTH ATLANTIC OCEAN

By H. C. HUNTER

Atmospheric pressure.—The pressure was above normal, on the average, over most parts of the North Atlantic area which are covered by available reports. The excess was noteworthy over the west-central portion, where the Nantucket station reported a positive departure of 5.1 millibars (0.15 inch). The north-central West Indies region and the northern part of the Gulf of Mexico had pressure somewhat below normal.

The extremes of pressure in the vessel reports now at hand were 1,032.5 and 993.2 millibars (30.49 and 29.33 inches, respectively). The high mark was recorded on the American liner *Extavia*, near 40° N., 27° W., during the forenoon of the 5th. The low mark was noted not quite 100 miles to east-southeastward of Charleston, S. C., very early on the 11th, by the American steamship *Tydolgas*, which was then in the north semicircle of the second of the August tropical disturbances.

In some land areas affected by the first or the second of these cyclones it is noteworthy that stations near the coast recorded much lower readings than that of the *Tydolgas*, the lowest of these shore readings being 974.7 millibars (28.78 inches) at Savannah on the 11th.

TABLE 1.—*Averages, departures, and extremes of atmospheric pressure (sea level) at selected stations for the North Atlantic Ocean and its shores, August 1940*

Station	Average pressure	Departure from normal	Highest	Date	Lowest	Date
	Millibars	*Millibars*	*Millibars*		*Millibars*	
Lisbon, Portugal	1,018.5	+1.9	1,023	17	1,011	20
Horta, Azores	1,023.8	+0.9	1,030	9	1,015	25, 26
Belle Isle, Newfoundland [1]	1,014.0	+1.8	1,029	23	999	26
Halifax, Nova Scotia [2]			1,032	30	1,010	20, 21
Nantucket	1,020.7	+5.1	1,031	11	1,004	20
Hatteras	1,017.3	+1.4	1,024	12	1,005	19
Turks Island	1,015.6	−1.7	1,017	[3] 2	1,010	6
Key West	1,015.2	0.0	1,019	30	1,012	20
New Orleans	1,014.6	−0.6	1,020	31	1,006	6

[1] For 24 days.
[2] For 20 days.
[3] Also 5 later dates.

NOTE.—All data based on available observations, departures compiled from best available normals related to time of observation, except Hatteras, Key West, Nantucket, and New Orleans, which are 24-hour corrected means.

For those portions of the North Atlantic remote from the tropics the lowest reading found was 997.3 millibars (29.45 inches), noted on the United States Army transport *American Legion*, near the coast of northwestern Norway on the morning of the 18th.

Cyclones and gales.—On the ocean areas north of the 34th parallel of latitude there was little storminess worth mentioning. One occurrence of force 10 (whole gale) is indicated in the table of storms, this coming during the night of the 26th–27th at the location of the United States Coast Guard cutter *Champlain*, about 39° N.,59° W. A LOW of considerable strength for the time of year had moved east-northeastward off the coast of Labrador during the preceding day, and a narrow trough extended southward from the center to about the 35th parallel of latitude, causing strong shifting winds within a small strip.

Disturbances of the tropical region.—Three cyclones affected the North Atlantic waters within the tropics and a short distance outside during the month. The first two of these are described elsewhere in this REVIEW, but the third storm is to be described in the next succeeding issue.

The earliest of these storms formed east of Florida on the 2d or 3d and moved slowly to the coast of southwestern Louisiana by the 7th, seemingly never reaching hurricane intensity, though one vessel met a force 11 wind.

The second storm traveled northwestward from the vicinity of St. Thomas on the 5th to the coast of South Carolina on the 11th. During the final hours of its passage over water there were hurricane force winds, as noted by two vessels. The tracks of the first and second storms are indicated on an accompanying map.

The third storm, coming from the southeastward, was not far off Hatteras when the month ended.

Fog.—Reports indicate much less fog than normal, especially near New England and Nova Scotia. However, the foggiest 5° square for the entire North Atlantic ocean area was in this section, 40° to 45° N., 65° to 70° W., where fog was observed on 5 days, the normal August occurrence there being 17 days.

During the 9-day period, 9th to 17th, there was no fog in any part of the ocean that available reports were covering on those days.